



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/576,740

02/01/2007

Takashi Mashimo

P71246US0

5439

136 7590 12/07/2009
JACOBSON HOLMAN PLLC
400 SEVENTH STREET N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER

MICALI, JOSEPH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,740	Applicant(s) MASHIMO ET AL.	
	Examiner Joseph V. Micali	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

The amendments/argumentation filed on August 17th, 2009 have been entered. Claims 3 and 7-8 are pending and presented for examination on the merits, as claims 1-2 and 4-6 have been cancelled and claims 7-8 have newly been added as per applicant's amendment.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1793

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 3 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. 2002-050364 by Kurano, in view of US Patent No. 6,610,435 by Maruyama et al and US Patent Pub. No. 2003/0104262 by Kuroki et al.

With respect to claim 3, Kurano discloses a fuel cell separator (**title**) comprising:

a separator main body that includes a gas channel, a manifold that penetrates the separator main body in a fuel cell stacking direction, a groove that connects the gas channel to the manifold, and concave portions in the main body (**claim 1 and figures 1-3**);

a plate member that covers an opening of the groove (**claim 1 and figures 2-3**); and

a gasket that is made of an elastic material, prevents gas leakage from the manifold to the outside, and is formed in a region on the surfaces of the separator main body and the plate member, the region surrounding the manifold (**claim 1, paragraphs 0006-0007, 0016, and figures 2-3**).

Kurano is silent with regards to a power generating device interposed between the fuel cell separator and another fuel cell separator, with the power generating device having an electrolyte film and electrode films, as the Kurano disclosure is only drawn to the separator. Furthermore, Kurano is silent with regards to the plate member through holes and the corresponding elastic gasket filling, although Kurano does teach an injection molding process of the gasket and the level difference space of figure 3, which most likely teaches some of the elastic material will fill the notches.

Art Unit: 1793

Maruyama is drawn to a fuel gas with reduced gas leakage. Specifically, Maruyama teaches a fuel cell where a gasket covers a portion of the solid polymer electrolyte membrane with a plurality of separators separating the electrode units; thus, stacking the electrode units and separators to form a fuel cell (**abstract**).

At the time of invention it would have been obvious to a person of ordinary skill in the art to produce the product of Kurano including the addition of a power generating device interposed between separators, in view of the teaching of Maruyama. The suggestion or motivation for doing so would have been to form a fuel cell, or at least units for a fuel cell (**Maruyama, abstract**).

Kuroki is drawn to constituent parts for fuel cells comprising a separator-gasket structure (**abstract**). Specifically, Kuroki discloses the plate member comprising a through hole, with the elastic gasket (rubber) permeating through the through hole and to the other side of the plate (**paragraph 0044 and figure 7**).

At the time of invention it would have been obvious to a person of ordinary skill in the art to produce the modified product of Kurano including a through hole with elastic gasket filling, in view of the teaching of Kuroki. The suggestion or motivation for doing so would have been to use a method of fixing which does not require bonding, as the gasket is fixed through the through hole (**Kuroki, paragraph 0044**).

With respect to claims 7-8, as Kuroki shows the diameter of the through hole being smaller than the portion of the gasket filled outside of the through hole (**figure 7**), such limitations would be covered by the combination of Kuroki with primary reference Kurano.

Art Unit: 1793

Response to Arguments

5. Applicant's arguments with respect to the current claim set have been considered but are moot in view of the new ground(s) of rejection.

With respect to applicant's argumentation, the Ohnuma reference has been withdrawn (and thus, argumentation on the reference is no longer pertinent nor persuasive) and the examiner has clarified the rejection above regarding the limitation of "part of the elastic material also fills the concave portions" including use of the newly applied Kuroki reference.

Conclusion

6. Claims 3 and 7-8 are rejected.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph V. Micali whose telephone number is (571) 270-5906. The examiner can normally be reached on Monday through Friday, 7:30am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry A. Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph V Micali/
Examiner, Art Unit 1793

December 3, 2009

/Melvin Curtis Mayes/
Supervisory Patent Examiner, Art Unit 1793